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WAYNE A. KEOWN
SUITE 1200
500 WEST CUMMINGS PARK
WOBURN, MA 01801

EXAMINER	
LE, EMILY M	
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1648	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,418	KANDIMALLA ET AL.	
	Examiner	Art Unit	
	Emily Le	1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9,11 and 39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9,11 and 39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/25/06* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of a) Y is a non-natural pyrimidine nucleoside; Z) guanosine; X1-X3 are naturally occurring nucleoside, and X4 is an immunostimulatory moiety that is methylphosphonate in the reply filed on 05/15/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Status of Claims

2. Claims 1-8, 10 and 12-38 are cancelled. Claim 39 is added. Claims 9, 11 and 39 are pending and under examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites a dependency to a canceled claim. Hence, it is unclear what Applicant intends to encompass in claim 11. Therefore, the claims are rendered indefinite. For the purpose of advancing prosecution, the Office interprets claim 11 as a dependent of claim 9.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The rejection of claim 9 as being anticipated by Zhao et al. is withdrawn in view of Applicant's amendment to the claims. It should be noted that the rejection is not withdrawn in view of Applicant's argument, wherein Applicant argues that Zhao et al. is not prior art since Applicant has claimed priority to 60/201578, filed May 1, 2000. Contrary to Applicant's assertion, the earliest priority date claimed by Applicant is 09/26/2000, as indicated in Applicant's amendment to the specification. See page 2 of Applicant's 12/26/2007 submission. Thus, prior to the entry of this amendment, Zhao et al. is prior art.

7. The rejection of the claims as being anticipated by Agrawal et al. is withdrawn in view of Applicant's amendment.

8. Claim 9 is rejected under 35 U.S.C. 102(a) as being anticipated by Schwartz et al.[1]

The claims are directed to an oligonucleotide having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each or a immunostimulatory moiety, wherein the immunostimulatory moiety for X1 is limited to one selected from a group consisting of

C3-alkyl linker, 2-aminobutyl-1,3-propanediol linker and Beta-L-deoxynucleoside; for X2 is an amino linker; for X3 is a methylphosphonate; for X4 is either methylphosphonate or 2'-O-methyl-ribonucleoside; and wherein C is a non-natural pyrimidine nucleoside, and G is guanosine, 2'deoxyguanosine or a non-natural purine nucleoside.

Schwartz et al. teaches of immunostimulatory oligonucleotides having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each; and wherein C is a non-natural pyrimidine nucleoside, and G is 2'deoxyguanosine. [Table 1, page 35, in particular.] The oligonucleotides of Schwartz et al. are the same as the claimed oligonucleotides. Hence, Schwartz et al. anticipates the claimed invention.

It is noted that in response to a prior rejection containing Schwartz et al. as a prior art reference, Applicant argues that the teachings of Schwartz et al. is directed at immunostimulatory sequences that has a modified cytosine having an electron withdrawing (hydrogen bond acceptor) group at the C-5 and/or C-6 position. This argument has been noted, however, it is moot in relation to claim 9. Claim 9 is not limited to a particular non-natural pyrimidine.

9. Claims 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al.[2]

The claims are directed to an oligonucleotide having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each or a immunostimulatory moiety, wherein the immunostimulatory moiety for X1 is limited to one selected from a group consisting of

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[1] Schwartz et al. WO 99/62923, published December 09, 1999.
[2] Nguyen et al. Modification of DNA duplexes to smooth their thermal stability independently of their base content for DNA sequencing by hybridization. Nucleic Acids Research, 1997, Vol. 25, No. 15, 3059-3065.

C3-alkyl linker, 2-aminobutyl-1,3-propanediol linker and Beta-L-deoxynucleoside; for X2 is an amino linker; for X3 is a methylphosphonate; for X4 is either methylphosphonate or 2'-O-methyl-ribonucleoside; and wherein C is a non-natural pyrimidine nucleoside, and G is guanosine, 2'deoxyguanosine or a non-natural purine nucleoside. Claim 11, which has been interpreted to depend on claim 9, requires the non-natural pyrimidine nucleoside to have the formula set forth in the claim, formula (I).

Nguyen et al. teaches several oligonucleotides having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each. The C in the oligonucleotides of Nguyen et al. is N4-ethylcytosine, a non-natural pyrimidine nucleoside, and G is 2'deoxyguanosine. [First full paragraph, left column on page 3061; Figure 2, and Tables 1-3, in particular.] N4-ethylcytosine is not a cytidine or deoxycytidine, and have a formula that is in accordance with formula (I), wherein D a hydrogen bond donor, D' is a hydrogen, A is a hydrogen bond acceptor, S is a pentose sugar ring, and X is nitrogen.

It is recognized that Nguyen et al. does not comment on the immunostimulatory activity of the oligonucleotide compounds that Nguyen et al. teaches, however, MPEP § 2112 [R3] sets forth that something which is old does not become patentable upon the discovery of a new property. Specifically, MPEP § 2112 [R3] [I] states: "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily

make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977)". Hence, Applicant's discovery of a previously unappreciated property, the immunostimulatory property of the oligonucleotide compounds of Nguyen et al., of the prior art composition does not render the old composition patentably new to the Applicant. Thus, the claimed composition is obvious over the teaching of Nguyen et al.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 9, 11 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al., as applied to claim 9 above.

The significance of claim 9 is provided above. Claim 11, which has been interpreted to depend on claim 9, requires the non-natural pyrimidine nucleoside to have the formula set forth in the claim, formula (I). Claim 39 is directed to same composition as claim 9, with the following exceptions: C is a 2'-deoxycytidine and G is a non-natural purine nucleoside.

The significance of Schwartz et al., as it pertains to claim 9 is discussed above. As noted above, Schwartz et al. teaches of immunostimulatory oligonucleotides that are the same as those claimed in claim 9. It is noted that the oligonucleotides of Schwartz et al. does not have a non-natural pyrimidine set forth in formula (I). However, it is further noted that Schwartz et al. does suggest the use cytosine arabinoside, a non-

natural pyrimidine nucleoside. [Claim 4, page 39 in particular.] Cytosine arabinoside is in accordance with formula (I).

Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use cytosine arabinoside as an alternative to the other non-natural pyrimidines present in the oligonucleotides of Schwartz et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

Regarding clam 39, in addition to oligonucleotides that comprise non-natural pyrimidine nucleoside, Schwartz et al. also teaches of oligonucleotides that comprises natural pyrimidine nucleoside. These oligonucleotides, however, do not comprise a non-natural purine nucleoside. However, at the time the invention was made, Schwartz et al. discloses that non-natural purine nucleosides can be used as an alternative to the natural purine nucleosides. [Lines 22-32, page 12, in particular.] Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use non-natural purine nucleoside for G as an alternative to the natural purine present in the oligonucleotides of Schwartz et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the

invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

It is noted that in response to a rejection containing Schwartz et al. as a prior art reference, Applicant argues that the teachings of Schwartz et al. is directed at immunostimulatory sequences that has a modified cytosine having an electron withdrawing (hydrogen bond acceptor) group at the C-5 and/or C-6 position. This argument has been noted, however, it should be noted that the teachings of Schwartz et al. is clearly not limited to the modified cytosine cited by Applicant. This is clearly evidenced by claim 4 of Schwartz et al., wherein Schwartz et al. clearly discloses of various modified cytosines, including those that are encompassed by claim 11 of the instantly claimed invention.

12. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al., in view of Schwartz et al.

As discussed above, Nguyen et al. anticipates the invention of claim 9. In the instant case, claim 39 is directed to same composition as claim 9, with the following exceptions: C is a 2'-deoxycytidine and G is a non-natural purine nucleoside.

It is noted that Nguyen et al. does not teach the use of a non-natural purine nucleoside for G.

However, at the time the invention was made, Schwartz et al. teaches that non-natural purine nucleosides can be used as an alternative to the natural purine nucleosides. [Lines 22-32, page 12, in particular.] Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use

non-natural purine nucleoside for G as an alternative to the natural purine present in the oligonucleotides of Nguyen et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

13. Claims 9, 11 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al.[3], in view of Schwartz et al.

The significance of claims 9, 11 and 39 is provided above.

Zhao et al. teaches of immunostimulatory oligonucleotides having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each; and wherein C is 2'-deoxycytidine and G is 2'-deoxyguanosine.

Zhao et al. does not teach the use of a non-natural pyrimidine nucleoside for C.

However, at the time the invention was made, Schwartz et al. suggest the use cytosine arabinoside, a non-natural pyrimidine as an alternative to natural pyrimidine. [Claim 4, page 39 in particular.] Cytosine arabinoside is in accordance with formula (I).

Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use cytosine arabinoside as an alternative to the natural pyrimidine present in the oligonucleotides of Zhao et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the

time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

Regarding clam 39, Zhao et al. does not teach the use of a non-natural purine nucleoside for G.

However, at the time the invention was made, Schwartz et al. teaches that non-natural purine nucleosides can be used as an alternative to the natural purine nucleosides. [Lines 22-32, page 12, in particular.] Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use non-natural purine nucleoside for G as an alternative to the natural purine present in the oligonucleotides of Zhao et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

It is noted that in response to the previous office action, Applicant argues that Zhao et al. is not prior art since Applicant has claimed priority to 60/201578, filed May 1, 2000. This argument has been considered, however, it is not found persuasive. Contrary to Applicant's assertion, the earliest priority date claimed by Applicant is 09/26/2000, as indicated in Applicant's amendment to the specification. See page 2 of Applicant's 12/26/2007 submission. Thus, Zhao et al. is indeed prior art.

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[3] Zhao et al. Immunostimulatory activity of CpG containing phosphorothioate oligodeoxynucleotide is modulated b modification of a single deoxynucleoside. Bioorganic and Medicinal Chemistry Letters, May 15, 2000, Vol. 10, 1051-1054.

Additionally, it is noted that in response to a rejection containing Schwartz et al. as a prior art reference, Applicant argues that the teachings of Schwartz et al. is directed at immunostimulatory sequences that has a modified cytosine having an electron withdrawing (hydrogen bond acceptor) group at the C-5 and/or C-6 position. This argument has been noted, however, it should be noted that the teachings of Schwartz et al. is clearly not limited to the modified cytosine cited by Applicant. This is clearly evidenced by claim 4 of Schwartz et al., wherein Schwartz et al. clearly discloses of various modified cytosines, including those that are encompassed by claim 11 of the instantly claimed invention.

14. Claims 9, 11 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al.,[4] in view of Schwartz et al.

The significance of claims 9, 11 and 39 are provided above.

Agrawal et al. teaches of immunostimulatory oligonucleotides having the formula X1X2CGX3X4, wherein X1-X4 are a nucleoside each; and wherein G is 2'deoxyguanosine. [See Figure 2, in particular.]

Agrawal et al. does not teach the use of a non-natural pyrimidine nucleoside for C.

However, at the time the invention was made, Schwartz et al. suggest the use cytosine arabinoside, a non-natural pyrimidine as an alternative to natural pyrimidine. [Claim 4, page 39 in particular.] Cytosine arabinoside is in accordance with formula (I).

[4] Agrawal et al. U.S. Provisional Application No. 60/178562, which U.S. Patent No. 6815429 has priority.

Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use cytosine arabinoside as an alternative to the natural pyrimidine present in the oligonucleotides of Agrawal et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

Regarding clam 39, Agrawal et al. does not teach the use of a non-natural purine nucleoside for G.

However, at the time the invention was made, Schwartz et al. teaches that non-natural purine nucleosides can be used as an alternative to the natural purine nucleosides. [Lines 22-32, page 12, in particular.] Hence, at the time the invention was made, it would have been prima facie obvious for one of ordinary skill in the art to use non-natural purine nucleoside for G as an alternative to the natural purine present in the oligonucleotides of Agrawal et al. One of ordinary skill in the art, at the time the invention was made would have been motivated to do so to make an immunostimulatory oligonucleotide. One of ordinary skill in the art, at the time the invention was made, would have had a reasonable expectation of success for doing so because the substitution of equivalents is routinely practiced in the art.

It is noted that in response to the previous office action, Applicant argues that Schwartz et al. fails to provide the teachings that Agrawal et al. lacks. This argument

has been considered, however, it is not found persuasive for the reason(s) set forth in the instant rejection. While it may appear that Applicant is arguing that the teachings of Schwartz et al. is directed at immunostimulatory sequences that has a modified cytosine having an electron withdrawing (hydrogen bond acceptor) group at the C-5 and/or C-6 position. This argument has been noted, however, it should be noted that the teachings of Schwartz et al. is clearly not limited to the modified cytosine cited by Applicant. This is clearly evidenced by claim 4 of Schwartz et al., wherein Schwartz et al. clearly discloses of various modified cytosines, including those that are encompassed by claim 11 of the instantly claimed invention.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. The provisional obviousness-type double patenting rejection of the claims over 10/694383 is withdrawn in view of Applicant's submission.

17. Claim 39 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 23 of copending Application No. 11/274043. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

In response to the rejection, Applicant notes that if this is the only outstanding rejection, then, the Office should withdraw the rejection for the copending application is later filed.

Applicant's submission has been considered, however, the obviousness-type double patenting rejection is not the only outstanding rejection. In the instant case, until the rejection is properly addressed, the rejection is maintained.

The invention claimed in the conflicting patent application is directed to an oligonucleotide having the formula Yn….Y1Y2CGX1X2….Xm, wherein Y1-Yn and X1-Xm a nucleoside each or a immunostimulatory moiety, and wherein C is cytosine, and G is 7-deazaguanosine, a non-natural purine nucleoside.

The difference between the claims is: The oligonucleotide of the conflicting application further comprises Yn and Xm. However, it is noted that the oligonucleotide encompassed by the claims of the conflicting patent application is a species of oligonucleotides that are encompassed by the oligonucleotides being claimed in the instant patent application. In the instant case, the species of oligonucleotide being claimed in the conflicting patent application anticipates the genus of oligonucleotides instantly being claimed.

The other difference is that the conflicting patent application does not specifically define what is encompassed by immunostimulatory moiety. However, it is noted that the specification of the conflicting patent application teaches the use of 1,3-propanediol linker, substituted or unsubstituted as an immunomodulatory moiety.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

18. No claims are allowed.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Le whose telephone number is (571)272-0903. The examiner can normally be reached on Monday - Friday, 8 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce R. Campell can be reached on (571) 272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Emily Le/
Patent Examiner, Art Unit 1648

/E. L./